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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,252

09/21/2005

Riki Okamoto

52433/818

1945

26646 7590 12/22/2009
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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,252	RIKI OKAMOTO ET AL.	
	Examiner	Art Unit	
	Deborah Yee	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 6 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 23, 2009 has been entered.

Election/Restrictions

2. Claim 6 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 7, 2008.

Response to Arguments

3. Applicant's arguments filed November 23, 2009 with respect to the rejection(s) of claim(s) 1 and 2 under 35 U.S.C.103 over Japanese patent 2001-342543 to Okamoto Tsutomu (hereafter JP'543) have been fully considered and are persuasive. JP'543 is directed to a hot rolled steel sheet containing Mg, Ti and Nb whereby the Ti and Nb form oxide precipitates with Mg to enhance steel strength. In contrast, present invention recites steel containing no Mg and forms TiC and/or NbC precipitates for strengthening ferrite structure. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2002-180188 to Okada et al. (hereafter JP'188), Japanese patent 2002-180189 to Okada et al. (hereafter JP'189) or Japanese patent 2002-180190 to Okada et al. (hereafter JP'190) in view of European patent application 0320003 to Tomita et al. (hereafter EP'003).

6. Primary prior art teaches specific examples of high strength hot rolled steel sheet having excellent hole expandability and ductility and tensile strength of at least 980 N/mm² which meet the claimed composition except for the absence of Al, at least one of V and Mo, and at least one of Cu and Ni. See Steel # 8 in tables 1 and 2 of JP'188; Steel #5 in tables 1 and 2 of JP'189; and Steel #7 in tables 1 and 2 of JP'190.

7. Although Al, V and/or Mo, and Cu and/or Ni recited in claims are not taught by primary prior art as alloying constituents, such difference would not be a patentable merit. Note it is conventional practice well known in the metallurgical art to add these elements in small amounts to other analogous ferritic steels to enhance mechanical properties. See for instance, the last two paragraph on page 3 of the secondary teaching, EP'003, teaches adding alloying constituents for the following reasons: Cu up to 2% to raise strength and corrosion resistance; less than 4% Ni to improve toughness

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and raise strength and hardenability; up to 0.3% V for precipitation hardening; up to 2% Mo to raise strength; and 0.01 to 0.1% Al for deoxidation. Therefore, the incorporation of common steel additives to the primary prior art steel would be a matter of choice and routine optimization well within the skill of the artisan to select and productive of no new and unexpected results.

8. With regard to equations found in claims 1 and 2, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357,553 O.G.177; 57USPQ117, *Takiatwalla v. Marburg*, 620 O.G.685, 1949C.D.77, and *In re Pilling*, 403O.G. 513, 44F (2)878, 1931C.D. 75. In the instant case, when calculated, the specific steel examples referred to in paragraph 6 meet or closely approximate the claimed equations.

9. Also similar to present invention, paragraph [0014] of JP'188, JP'189 and JP'190 teaches steel alloy having mainly a ferritic microstructure with TiC and/or NbC precipitation.

10. For the foregoing reasons, claims would not patentably distinguish over prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/